



Attorney Docket No. IMMR-106/01US

COPY

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of Louis B. ROSENBERG *et al.*

Serial No.: 10/615,927

Examiner: Unassigned

Filed: July 10, 2003

Art Unit: 2675

Confirmation No. 9912

For: **NETWORKED APPLICATIONS INCLUDING HAPTIC FEEDBACK**

U.S. Patent and Trademark Office
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Arlington, VA 22202

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §1.97(b)**

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56,

Applicant(s) hereby submits the following information in conformance with 37 C.F.R.

§§1.97 and 1.98.

- ☒ Pursuant to 37 C.F.R. §1.98, a copy of each document cited in the attached Form PTO/SB/08A (1 of 2) is provided on the enclosed CD.
- ☒ No copies of the publications listed on the attached Form PTO/SB/08A (2 of 2) are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial Nos. 09/153,781, filed September 16, 1998, 08/571,606 (now U.S. Patent No. 6,219,032 B1), 09/050,665 (now U.S. Patent No. 6,219,033 B1), 08/664,086 (now U.S. Patent No. 6,028,593), 08/691,852 (now U.S. Patent No. 5,956,484) and/or 08/566,282 (now U.S. Patent No. 5,734,373) to which the above-identified application claims priority under 35 U.S.C. §120.
- ☐ No copies of any U.S. patents or U.S. patent application publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98 because this application was filed after June 30, 2003.
- ☐ Publication(s) ___ listed on the attached Form PTO/SB/08A were cited in a foreign search or examination report corresponding to ___ application serial no. ___ and mailed on ___.
- ☐ Enclosed is a copy of a non-English publication(s) ___. Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).

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- ☐ Enclosed is a copy of a non-English publication(s) ____ English language publication ____ (copy enclosed) claims priority from this non-English publication.
- ☐ Enclosed is an explanation of non-English publication(s) ____ for which an English translation is not available.
- ☐ Enclosed is an English translation of non-English publication(s) ____ cited in the attached Form PTO/SB/08A.
- ☐ Enclosed is a copy of pending patent Application Serial No. ____.

This Information Disclosure Statement is filed within any one of the following time periods:

- ☐ within three months from the filing date of this national application other than a CPA under 37 C.F.R. § 1.53(d);
- ☐ within three months from the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in this international application;
- ☒ before the mailing date of a first office action on the merits; or
- ☐ before the mailing of a first office action after the filing of a request for continued examination under 37 C.F.R. § 1.114.


It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form PTO/SB/08A to the undersigned.

Dated: October 18, 2004

Cooley Godward LLP
One Freedom Square
Reston Town Center
11951 Freedom Drive
Reston, Virginia 20190-5656
(703) 456-8000
(703) 456-8100

Respectfully submitted,
COOLEY GODWARD LLP

By: _____


Erik B. Milch
Reg. No. 42,887



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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 6

Complete If Known

Application Number 10/615,927
Filing Date July 10, 2003
First Named Inventor Louis B. Rosenberg
Art Unit 2675
Examiner Name Unassigned
Attorney Docket Number IMMR106/01US

U.S. PATENT DOCUMENTS

Examiner	Cite No.	Document Number Number Kind Code* (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/RL/		6,422,941	7/23/2002	Thomer et al.	
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Date
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¹ Applicant's unique citation designation number (optional). ² Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet **2** of **6****Complete If Known**

Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

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/RL		4,708,656	11/24/1987	De Vries et al.	
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/RL		2,972,140	2/14/1961	Hirsch	

Examiner Initials*	Cite No.	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ²	Number ³	Kind Code ³ (if known)			
/RL		EP	0349086		1/3/1990	Stork Kwant B.V.	
		JP	H2-185278		7/19/1990	Talco Corporation	
		JP	H4-6381		1/13/1992	Epoch Co. and Key- Planning Co.	
		JP	H7-24147		1/27/1995	Sega Corporation	
/RL		JP	H5-192449		8/3/1993	Talco Corporation	

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Sheet **3** of **6****Complete if Known**

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First Named Inventor	Louis B. Rosenberg
Art Unit	2675
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Attorney Docket Number	IMMR106/01US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
/RL/		BAIGRIE, "Electric Control Loading - A Low Cost, High Performance Alternative," <i>Proceedings of Interservice/Industry Training Systems Conference</i> , pp. 247-254, November 6-8, 1990.
		IWATA, "Pen-based Haptic Virtual Environment," 0-7803-1363-1/93 IEEE, pp 287-292, 1993.
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/RL/		RUSSO, "Controlling Dissipative Magnetic Particle Brakes in Force Reflective Devices," DSC-Vol. 42, <i>Advances in Robotics</i> , pp. 63-70, ASME 1992.

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/Regina Liang/

Date
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04/28/2009

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Sheet 4

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Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
/RL/		KONTARINIS et al., "Display of High-Frequency Tactile Information to Teleoperators," <i>Telemanipulator Technology and Space Telerobotics</i> , Won S. Kim, Editor, Proc. SPIE Vol. 2057, pp. 40-50, Sep. 7-9, 1993.
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↓		EBERHARDT et al., "OMAR - A Haptic display for speech perception by deaf and deaf-blind individuals," <i>IEEE Virtual Reality Annual International Symposium</i> , Seattle, WA, Sep. 18-22, 1993.
/RL/		RABINOWITZ et al., "Multidimensional tactile displays: Identification of vibratory intensity, frequency, and contactor area," <i>Journal of The Acoustical Society of America</i> , Vol. 82, No. 4, October 1987.

Examiner
Signature

/Regina Liang/

Date

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12/05/2007

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/RL/		BEJCZY et al., "Kinesthetic Coupling Between Operator and Remote Manipulator," <i>International Computer Technology Conference, The American Society of Mechanical Engineers</i> , San Francisco, CA, August 12-15, 1980.
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		OH-HYOUNG, "A Low-Cost Force Feedback Joystick and Its Use In PC Video Games," <i>IEEE Transactions on Consumer Electronics</i> , Vol. 41, No. 3, August 1995.
		MARCUS, "Touch Feedback In Surgery," <i>Proceedings of Virtual Reality and Medicine The Cutting Edge</i> , Sept. 8-11, 1994.
		BEJCZY, et al., "Universal Computer Control System (UCCS) For Space Telerobots," CH2413-3/87/0000/0318501.00 1987 IEEE, 1987.
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		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," <i>DSC-Vol. 55-1, Dynamic Systems and Control: Volume 1</i> , ASME 1994.
✓ /RL/		GOBEL et al., "Tactile Feedback Applied to Computer Mice," <i>International Journal of Human-Computer Interaction</i> , Vol. 7, No. 1, pp. 1-24, 1995.
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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

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/RL/		"Cyberman Technical Specification," Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide, 4/5/1994.
		OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95</i> , Seoul, Korea, 21-24 August 1995.
		KACZMAREK et al., "Tactile Displays," <i>Virtual Environment Technologies</i> , Chap. 9, pp. 349-414. undated.
		LAKE, "Cyberman from Logitech," at http://www.ibliblo.org/GameBytes/issue21/greviews/cyberman.html , 1994.
		"Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).
		"Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).
		SCANNELL, "Taking a Joystick Ride," <i>Computer Currents</i> , Boston Edition, Vol. 9, No. 11, November 1994
		YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," <i>Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems</i> , Raleigh, NC, July 7-10, 1992
✓		NOLL, "Man-Machine Tactile," <i>SID Journal</i> , July/August 1972 Issue.
/RL/		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance in Telepresence Tasks," <i>Ph.D. Dissertation</i> , Stanford University, June 1994.

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(2 of 2)

PTO/SB/06A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 18

Complete If Known

Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

U.S. PATENT DOCUMENTS

Examiner	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code ² (if known)			
/RL/		2,906,179	09/1959	Bower	
		3,157,853	11/17/1964	Hirsch	
		3,220,121	11/30/1965	Cutler	
		3,490,059	01/1970	Paulsen et al.	
		3,497,668	2/24/1970	Hirsch	
		3,517,446	06/30/1970	Corlyon et al.	
		3,531,868	10/1970	Stevenson	
		3,795,190	03/1974	Eckhardt	
		3,875,488	04/1975	Crocker et al.	
		3,890,958	06/1975	Fister et al.	
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		3,919,691	11/11/1975	Noil	
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		3,944,788	03/1978	Eaton	
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		4,571,834	02/1986	Fraser et al.	
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		4,593,470	06/1986	Davies	
/RL/		4,599,070	07/08/1986	Hladky et al.	

Examiner Signature	/Regina Liang/	Date Considered	12/05/2007
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 2 of 18**Complete If Known**

Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

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/RL/		4,601,206	07/1986	Watson	
		4,603,284	07/29/1986	Perzley	
		4,604,016	08/1986	Joyce	
		4,632,341	07/1987	Reppenger et al.	
		4,638,796	01/1987	Sheldon et al.	
		4,653,011	03/1987	Iwano	
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/RL/		4,868,549	09/19/1989	Affinito et al.	

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet **3** of **18****Complete If Known**

Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/RL/		4,879,556	11/1989	Dulmel	
		4,888,538	12/19/1989	Dimitov et al.	
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		4,925,312	05/1990	Onaga et al.	
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/RL/		5,044,956	09/03/1991	Behensky et al.	
Examiner Signature	/Regina Liang/			Date Considered	12/05/2007

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Sheet **4** of **18****Complete If Known**

Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

U.S. PATENT DOCUMENTS

Examiner	Cite No.	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/RL/		5,050,608	09/29/1991	Watanabe et al.	
		5,065,145	11/1991	Purcell	
		5,072,361	12/10/1991	Davis et al.	
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		5,103,404	04/07/1992	McIntosh	
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		5,116,051	05/26/1992	Moncrief et al.	
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		5,187,874	02/1993	Takahashi et al.	
/RL/		5,189,355	02/1993	Larkins et al.	

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/Regina Liang/

Date
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12/05/2007

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Sheet 5 of 18

Complete If Known

Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

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/RL/		5,189,806	03/1993	McMurtry et al.	
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		5,309,140	05/03/1994	Everett	
/RL/		5,313,230	05/1994	Venolia et al.	

Examiner Signature

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Date Considered

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Sheet 6 of 18**Complete if Known**

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Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

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		5,351,692	10/1994	Dow et al.	
		5,354,162	10/11/1994	Burdea et al.	
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		5,417,696	05/1995	Kashuba et al.	
		5,428,748	06/27/1995	Davidson et al.	
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		5,436,640	07/1995	Reeves	
		5,445,166	08/1995	Taylor	
		5,451,924	09/19/1995	Massimino et al.	
		5,459,382	10/17/1995	Jacobus et al.	
		5,466,213	11/14/1995	Hogan	
		5,467,763	11/1995	McMahon et al.	
		5,471,571	11/1995	Smith et al.	
		5,482,051	01/1996	Reddy et al.	
		5,512,919	04/30/1996	Araki	
/RL/		5,513,100	04/30/1996	Parker et al.	

Examiner
Signature

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Date
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**INFORMATION DISCLOSURE
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Sheet 7 of 18

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Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

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Examiner Signature	/Regina Liang/			Date Considered	12/05/2007

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**INFORMATION DISCLOSURE
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Sheet 8 of 18**Complete If Known**

Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code ² (If known)			
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First Named Inventor	Louis B. Rosenberg
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Sheet 10

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Complete if Known

Application Number 10/615,927

Filing Date July 10, 2003

First Named Inventor Louis B. Rosenberg

Art Unit 2675

Examiner Name Unassigned

Attorney Docket Number IMMR106/01US

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/Regina Liang/

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Sheet 11 of 18

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
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Signature

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Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

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Examiner Initials *	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
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STATEMENT BY APPLICANT**

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Sheet 15 of 18

Complete If Known

Application Number	10/615,927
Filing Date	July 10, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2675
Examiner Name	Unassigned
Attorney Docket Number	IMMR106/01US

OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
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Sheet 16

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Application Number 10/615,927

Filing Date July 10, 2003

First Named Inventor Louis B. Rosenberg

Art Unit 2675

Examiner Name Unassigned

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Attorney Docket Number	IMMR106/01US

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